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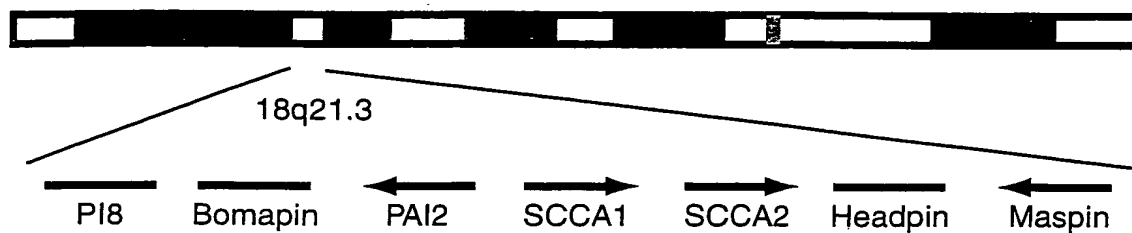
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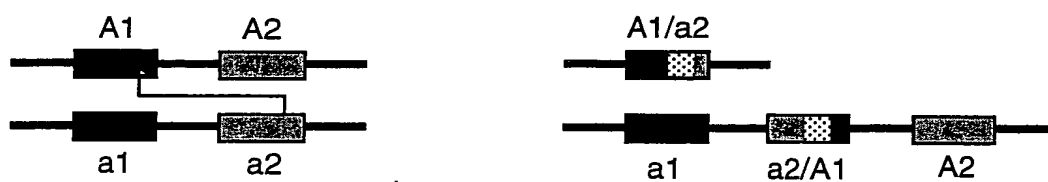
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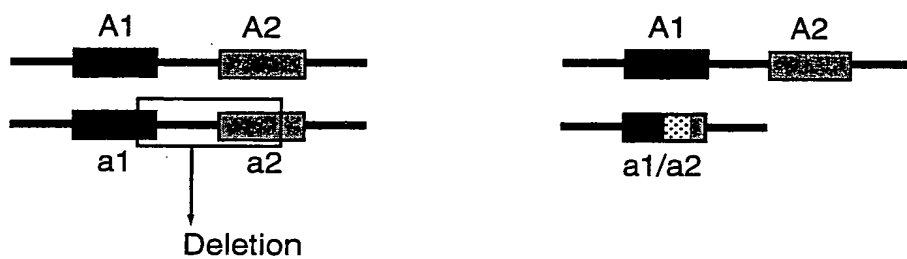


FIG. 1



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SCCA1 I1-ATGAATTCAC TCAGTGAAGC CAACACCAAG TTCATGTTTCG ACCTGTTCCA ACAGTTCAGA
SCCA2 I1-ATGAATTCAC TCAGTGAAGC CAACACCAAG TTCATGTTTCG ATCTGTTCCA ACAGTTCAGA

AAATCAAAAG AGAACAACAT CTTCTATTCC CCTATCAGCA TCACATCAGC ATTAGGGATG
AAATCAAAAG AGAACAACAT CTTCTATTCC CCTATCAGCA TCACATCAGC ATTAGGGATG

GTCCTCTTAG GAGCCAAAGA CAACACTGCA CAACAGATTA AGAAG-I2-GTTCT TCACTTTGAT
GTCCTCTTAG GAGCCAAAGA CAACACTGCA CAACAATTA GCAAG-I2-GTTCT TCACTTTGAT

CAAGTCACAG AGAACACCAC AGGAAAAGCT GCAACATATC AT-I3-GTTGATAG GTCAGGAAAT
CAAGTCACAG AGAACACCAC AGAAAAAGCT GCAACATATC AT-I3-GTTGATAG GTCAGGAAAT

GTTTCATCACC AGTTTCAAAA GCTTCTGACT GAATTCAACA AATCCACTGA TGCATATGAG
GTTTCATCACC AGTTTCAAAA GCTTCTGACT GAATTCAACA AATCCACTGA TGCATATGAG

CTGAAGATCG CCAACAAGCT CTTCCGAGAA AAAACGTATC TATTTTTTACA G-I4-GAATATTTA
CTGAAGATCG CCAACAAGCT CTTCCGAGAA AAGACGTATC AATTTTTTACA G-I4-GAATATTTA

GATGCCATCA AGAAATTTTA CCAGACCAGT GTGGAATCTG TTGATTTTGC AAATGCTCCA
GATGCCATCA AGAAATTTTA CCAGACCAGT GTGGAATCTA CTGATTTTGC AAATGCTCCA

GAAGAAAGTC GAAAGAAGAT TAACTCCTGG GTGGAAAGTC AAACGAATG-I5-AAAAAATTAA
GAAGAAAGTC GAAAGAAGAT TAACTCCTGG GTGGAAAGTC AAACGAATG-I5-AAAAAATTAA

AACCTAATTC CTGAAGGTAA TATTGGCAGC AATACACAT TGGTCTTGT GAACGCAATC
AACCTATTTT CTGATGGGAC TATTGGCAAT GATACGACAC TGGTCTTGT GAACGCAATC

TATTTCAAAG GGCAGTGGGA GAAAGAAATTT AATAAAGAAG ATACTAAAGA GGAAAAATTT
TATTTCAAAG GGCAGTGGGA GAATAAATTT AAAAAGAAA AACTAAAGA GGAAAAATTT

TGGCCAAACA AG-I6-AATACATA CAAGTCCATA CAGATGATGA GGCAATACAC ATCTTTTCAT
TGGCCAAACA AG-I6-AATACATA CAAATCTGTA CAGATGATGA GGCAATACAA TTCTTTAAT

TTTGCCTCGC TGGAGGATGT ACAGGCCAAG GTCCTGGAAA TACCATACAA AGGCAAAGAT
TTTGCCTTGC TGGAGGATGT ACAGGCCAAG GTCCTGGAAA TACCATACAA AGGCAAAGAT

CTAAGCATGA TTGTGTGCT GCCAAATGAA ATCGATGGTC TCAGAAG-I7-CTTGAAGAGAAA
CTAAGCATGA TTGTGTGCT GCCAAATGAA ATCGATGGTC TGAGAAG-I7-CTTGAAGAGAAA

CTCACTGCTG AGAAATTGAT GGAATGGACA AGTTTGCAGA ATATGAGAGA GACACGTGTC
CTCACTGCTG AGAAATTGAT GGAATGGACA AGTTTGCAGA ATATGAGAGA GACATGTGTC

GATTTACACT TACCTCGGTT CAAAGTGGAA GAGAGCTATG ACCTCAAGGA CACGTTGAGA
GATTTACACT TACCTCGGTT CAAAATGGAA GAGAGCTATG ACCTCAAGGA CACGTTGAGA

ACCATGGGAA TGGTGGATAT CTTCAATGGG GATGCAGACC TCTCAGGCAT GACCGGGAGC
ACCATGGGAA TGGTGAATAT CTTCAATGGG GATGCAGACC TCTCAGGCAT GACCTGGAGC

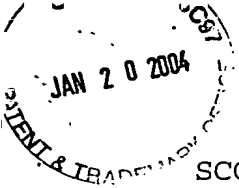
CGCGGTCTCG TGCTATCTGG AGTCCTACAC AAGGCCTTTG TGGAGGTAC AGAGGAGGGA
CACGGTCTCT CAGTATCTAA AGTCCTACAC AAGGCCTTTG TGGAGGTAC TGAGGAGGGA

GCAAGAGCTG CAGCTGCCAC CGCTGTAGTA GGATTCGGAT CATCACCTAC TTCAACTAAT
GTGGAAGCTG CAGCTGCCAC CGCTGTAGTA GTAGTCGAAT TATCATCTCC TTCAACTAAT

GAAGAGTTCC ATTGTAATCA CCCTTTCCTA TTCTTCATAA GGCAAAATAA GACCAACAGC
GAAGAGTTCT GTTGTAAATCA CCCTTTCCTA TTCTTCATAA GGCAAAATAA GACCAACAGC

ATCCTCTTCT ATGGCAGATT CTCATCCCCG TAG
ATCCTCTTCT ATGGCAGATT CTCATCCCCA TAG

FIG. 2



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SCCA1 MNSLSEANTK FMFDLFQQFR KSKENNIFYS PISITSALGM VLLGAKDNTA
SCCA2 MNSLSEANTK FMFDLFQQFR KSKENNIFYS PISITSALGM VLLGAKDNTA

QQI**K**KVLHFD QVTENTT**G**KA ATYHVDRSGN VHHQFQKLLT EFNKSTDAYE
QQI**S**KVLHFD QVTENTT**E**KA ATYHVDRSGN VHHQFQKLLT EFNKSTDAYE

LKIANKLFG**E** KTY**L**FLQEYL DAIKKFYQTS VES**V**DFANAP EESRKKINSW
LKIANKLFG**E** KTY**Q**FLQEYL DAIKKFYQTS VES**T**DFANAP EESRKKINSW

VESQTNEKIK NLI**P**EGNIG**S** **N**TTLVLVNAI YFKGQWE**K**KF **N**KEDTKEEK**F**
VESQTNEKIK NL**F**PDGT**I**G**N** **D**TTLVLVNAI YFKGQWE**N**KF **K**KENTKEEK**F**

WPNKN**T**YK**S**I QMMRQY**T**S**F**H FAS**L**EDVQAK VLEIPYKGKD LSMIVLLPNE
WPNKN**T**YK**S**V QMMRQY**N**S**F**N FAL**L**EDVQAK VLEIPYKGKD LSMIVLLPNE

IDGLQKLEEK LTA**E**KLM**E**WT SLQNMRE**T**RV DLHLPRFK**V**E ESYDLKDTLR
IDGLQKLEEK LTA**E**KLM**E**WT SLQNMRE**T**CV DLHLPRFK**M**E ESYDLKDTLR

TMGMV**D**IFNG DADLSGMT**G**S **R**GL**V**LS**G**VLH KAFVEVTEEG **A**EAAAA**T**AV**V**
TMGMV**N**IFNG DADLSGMT**T**WS **H**GL**S**V**S**KVLH KAFVEVTEEG **V**EAAAA**T**AV**V**

GF**G**S**S**P**A**S**T**N EEF**H**CNHPFL FFIRQ**N**K**T**NS ILFYGRFSSP
VV**E**L**S**S**P**S**T**N EEF**C**CNHPFL FFIRQ**N**K**T**NS ILFYGRFSSP

FIG. 3

SCCA1A2 cDNA sequence

ATGAATTCAC TCAGTGAAGC CAACACCAAG TTCATGTTTCG ACCTGTTCCA ACAGTTCAGA
 AAATCAAAAG AGAACAACAT CTTCTATTCC CCTATCAGCA TCACATCAGC ATTAGGGATG
 GTCCTCTTAG GAGCCAAAGA CAACACTGCA CAACAGATTA AGAAGGTTCT TCACTTTGAT
 CAAGTCACAG AGAACACCAC AGGAAAAGCT GCAACATATC ATGTTGATAG GTCAGGAAAT
 GTTCATCACC AGTTTCAAAA GCTTCTGACT GAATTCAACA AATCCACTGA TGCATATGAG
 CTGAAGATCG CCAACAAGCT CTTCGGAGAA AAAACGTATC TATTTTTACA GGAATATTTA
 GATGCCATCA AGAAATTTTA CCAGACCAGT GTGGAATCTG TTGATTTTGC AAATGCTCCA
 GAAGAAAGTC GAAAGAAGAT TAACTCCTGG GTGGAAAGTC AAACGAATGA AAAAATTAAA
 AACCTAATTC CTGAAGGTAA TATTGGCAGC AATACCACAT TGGTTCTTGT GAACGCAATC
 TATTTCAAAG GGCAGTGGGA GAAGAAATTT AATAAAGAAG ATACTAAAGA GGAAAAATTT
 TGGCCAAACA AGAATACATA CAARTCYRTA CAGATGATGA GGCAATACAM WTCYTTTMTAT
 TTTGCCTYGC TGGAGGATGT ACAGGCCAAG GTCCTGGAAA TACCATACAA AGGCAAAGAT
 CTAAGCATGA TTGTGYTGCT GCCAAATGAA ATCGATGGTC TSCAGAAGCT TGAAGAGAAA
 CTCACTGCTG AGAAATTGAT GGAATGGACA AGTTTGCAGA ATATGAGAGA GACAYGTGTC
 GATTTACACT TACCTCGGTT CAAARTGGAA GAGAGCTATG ACCTCAAGGA CACGTTGAGA
 ACCATGGGAA TGGTGRATAT CTTCAATGGG GATGCAGACC TCTCAGGCAT GACCKGGAGC
 CRCGGTCTCK YRSTATCTRR AGTCCTACAC AAGGCCTTTG TGGAGGTYAC WGAGGAGGGA
 GYRGAAGCTG CAGCTGCCAC CGCTGTAGTA GTAGTCGAAT TATCATCTCC TTCAACTAAT
 GAAGAGTTCT GTTGTAATCA CCCTTTCTTA TTCTTCATAA GGCAAAATAA GACCAACAGC
 ATCCTCTTCT ATGGCAGATT CTCATCCCCA TAG

FIG. 4

SCCA1A2 amino acid sequence

MNSLSEANTK FMFDLFQQFR KSKENNIFYS PISITSALGM VLLGAKDNTA
QQIKKVLHFD QVTENTTGKA ATYHVDRSGN VHHQFQKLLT EFNKSTDAYE
LKIANKLFGE KTYLFLQEYL DAIKKFYQTS VESVDFANAP EESRKKINSW
VESQTNEKIK NLIPEGNIGS NTTLVLVNAI YFKGQWEKKF NKEDTKEEKF
WPNKNTYKSI/V QMMRQYT/NSFH/N FAS/LLEDVQAK VLEIPYKGKD LSMIVLLPNE
IDGLQKLEEK LTAEKLMEWL SLQNMRETR/cV DLHLPRFKV/ME ESYDLKDTLR
TMGMVD/NIFNG DADLSGMTG/WS R/HGLV/SL/VSG/KVLH KAFVEVTEEG
A/VEAAAATAVV
VVELSSPSTN EEFCCNHPFL FFIRQNKTNS ILFYGRFSSP

FIG. 5

SCCA2A1 cDNA sequence

ATGAATTCAC TCAGTGAAGC CAACACCAAG TTCATGTTTCG ATCTGTTCCA ACAGTTCAGA
AAATCAAAAG AGAACAACAT CTTCTATTCC CCTATCAGCA TCACATCAGC ATTAGGGATG
GTCCTCTTAG GAGCCAAAGA CAACACTGCA CAACAAATTA GCAAGGTTCT TCACTTTGAT
CAAGTCACAG AGAACACCAC AGAAAAAGCT GCAACATATC ATGTTGATAG GTCAGGAAAT
GTTTCATCACC AGTTTCAAAA GCTTCTGACT GAATTCAACA AATCCACTGA TGCATATGAG
CTGAAGATCG CCAACAAGCT CTTCGGAGAA AAGACGTATC AATTTTACAA GGAATATTTA
GATGCCATCA AGAAATTTTA CCAGACCAGT GTGGAATCTA CTGATTTTGC AAATGCTCCA
GAAGAAAGTC GAAAGAAGAT TAACTCCTGG GTGGAAAGTC AAACGAATGA AAAAATTAAA
AACCTATTTT CTGATGGGAC TATTGGCAAT GATACGACAC TGGTTCCTTGT GAACGCAATC
TATTTCAAAG GGCAGTGGGA GAATAAATTT AAAAAAGAAA AACTTAAAGA GGAAAAATTT
TGGCCAAACA AGAATACATA CAARTCYRTA CAGATGATGA GGCAATACAM WTCYTTTMTAT
TTTGCCTYGC TGGAGGATGT ACAGGCCAAG GTCCTGGAAA TACCATACAA AGGCAAAGAT
CTAAGCATGA TTGTGYTGCT GCCAAATGAA ATCGATGGTC TSCAGAAGCT TGAAGAGAAA
CTCACTGCTG AGAAATTGAT GGAATGGACA AGTTTGCAGA ATATGAGAGA GACAYGTGTC
GATTTACACT TACCTCGGTT CAAARTGGAA GAGAGCTATG ACCTCAAGGA CACGTTGAGA
ACCATGGGAA TGGTGRATAT CTTCAATGGG GATGCAGACC TCTCAGGCAT GACCKGGAGC
CRCGGTCTCK YRSTATCTRR AGTCCTACAC AAGGCCTTTG TGGAGGTYAC WGAGGAGGGA
GYRGAAGCTG CAGCTGCCAC CGCTGTAGTA GGATTCGGAT CATCACCTAC TTCAACTAAT
GAAGAGTTCC ATTGTAATCA CCCTTTCCTA TTCTTCATAA GGCAAAATAA GACCAACAGC
ATCCTCTTCT ATGGCAGATT CTCATCCCCG TAG

FIG. 6

SCCA2A1 amino acid sequence

MNSLSEANTK FMFDLFQQFR KSKENNIFYS PISITSALGM VLLGAKDNTA
QQISKVLHFD QVTENTTEKA ATYHVDRSGN VHHQFQKLLT EFNKSTDAYE
LKIANKLFGE KTYQFLQEYL DAIKKFYQTS VESTDFANAP EESRKKINSW
VESQTNEKIK NLFPDGTIGN DTTLVLVNAI YFKGQWENKF KKENTKEEF
WPNKNTYKSI/V QMMRQYT/NSFH/N FAS/LLEDVQAK VLEIPYKGKD LSMIVLLPNE
IDGLQKLEEK LTAEKLMEWL SLQNMRETR/cV DLHLPRFKV/ME ESYDLKDTLR
TMGMVD/NIFNG DADLSGMTG/WS R/HGLV/SL/VSG/KVLH KAFVEVTEEG
A/VEAAAATAVV
GFGSSPASTN EEFHCNHPFL FFIRQNKTNS ILFYGRFSSP

FIG. 7

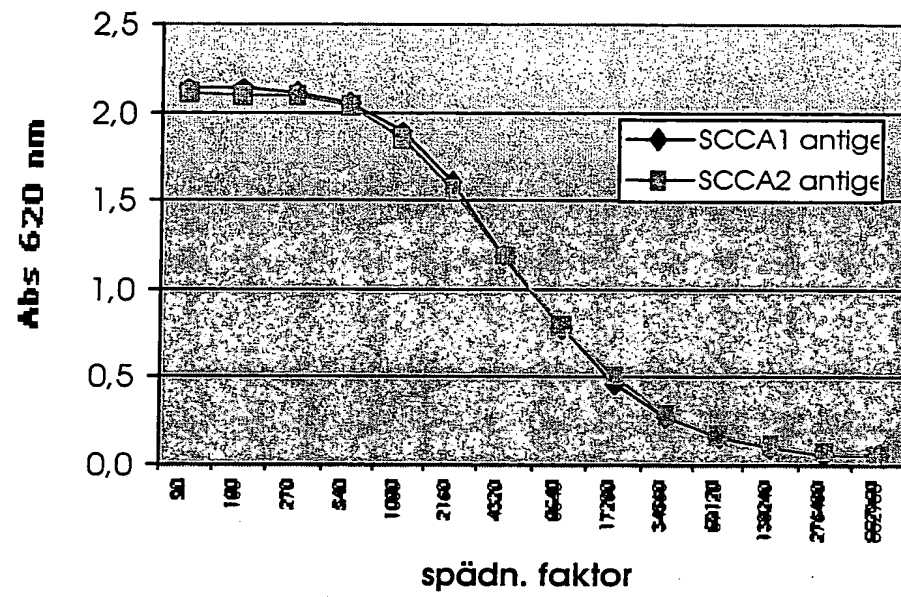


FIG. 8

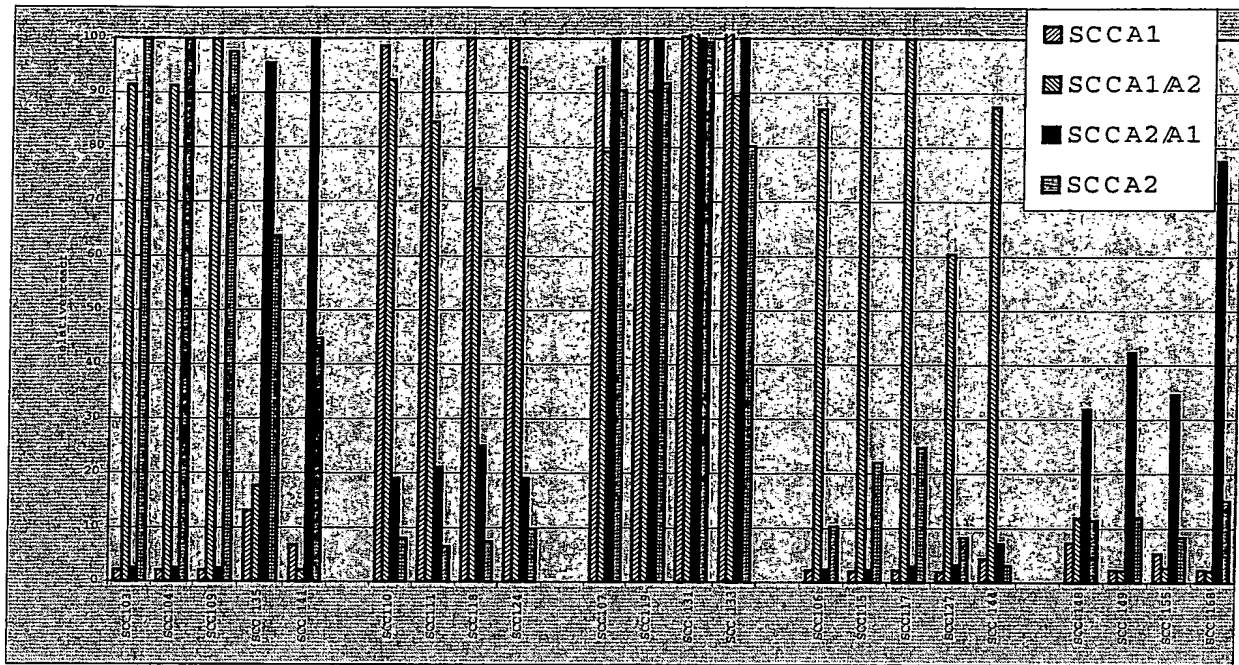


FIG. 9

Complexbinding of SCCA

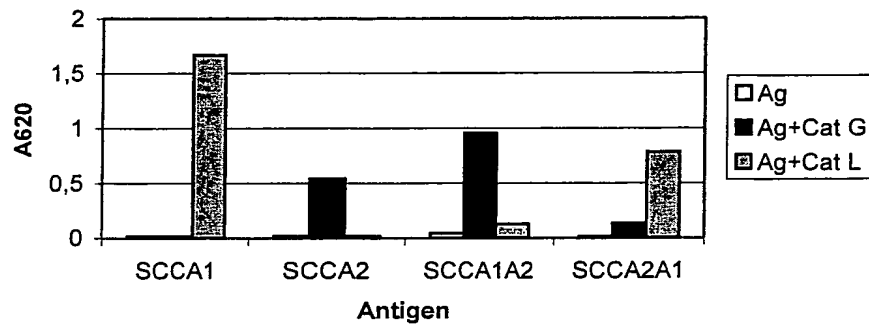


FIG. 10